DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-030030
Date Inspected: 14-Sep-2013

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name:	Bernie Docena, Tony Sherwood			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) JV job site between the times noted above in order to monitor ABF Quality Control activities and the in process work being performed by ABF production personnel. The following items were observed:

ESW Repair Excavation Welding
RWR-201308-004
ESW S-043, Location “T”-Face A:
The QA Inspector observed ABF welder Mike Jimenez (WID-4671) performing Shield Metal Arc Welding (SMAW) on the repair excavation on Electroslag Weld (ESW) “T”, at face A, Y’s= 3090mm,3110,3125,3170, 3190. The locations and repair information are listed in Request for Weld Repair (RWR) 201308-002 from Ultrasonic Testing indications designated for repair. The repair excavation was noted as:
Length (Y=3000mm~3480mm) L=480mm,W=75mm,D=40mm
Prior to welding, Mr. Jimenez was observed preheating the weld to over 350° Fahrenheit using the Miller ProHeat 35 with heat induction blankets and a propylene torch. The welder was using 4.0mm diameter electrode (E7018-1 HR4) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding process in use was the Shielded Metal Arc Welding process (SMAW). The welding parameters were verified by ABF QC Inspector Bernie Docena with a Fluke 337 current Clampmeter and preheat was verified with temperature indicators. The QC Inspector performed welding parameters verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

Tower Skirt Plate Splice Field Welds

Weld# 154 @ North Shaft

ABF RFI- 003417R02

The QA Inspector observed that ABF welder Kit Lai (WID-2953) was performing fit up and tack welding on Tower Skirt plate vertical weld joint #154 on Skirt plates ND1-A713 to SSD1-A544. ABF will be welding the first 500mm of the vertical weld to aid in installation of upper skirt plate sections. The QA Inspector and QC Inspector Tony Sherwood observed the gap of the weld joint at 7mm with steel backing. Per ABF Request For Information (RFI) 003417R02 the contractor is approved to use steel backing bar that will remain in place,up to a maximum of 8mm root gap. The original weld detail per the approved drawings (FWT-21) is a single vee Partial Joint Penetration (PJP) weld with 60° groove, 13mm landing and 0-gap (C-P2-GF). Mr. Sherwood stated that welding parameters and preheat are based off of Welding Procedure Specification (WPS) ABF-WPS-D15-2140-3. Mr. Lai was then observed preheating the weld to over 250° Fahrenheit using a propylene torch. The welding was being performed with the Flux Cored Arc Welding (FCAW) process using 1.8mm diameter electrode Innershield NR-232. The welding parameters were verified by Mr. Sherwood with a Fluke 337 current Clampmeter and preheat was verified with temperature indicators. The QA Inspector observed welding parameters at 230 amps with 22 volts. The QC Inspector performed welding parameters verifications at random intervals throughout the shift. The QC Inspector stated that ABF QC would perform Magnetic Particle Testing (MT) of all root passes and 10% MT of the final cover passes. The work is expected to continue with initial welding of the Skirt plate splice welds on 9-16-13.

Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer